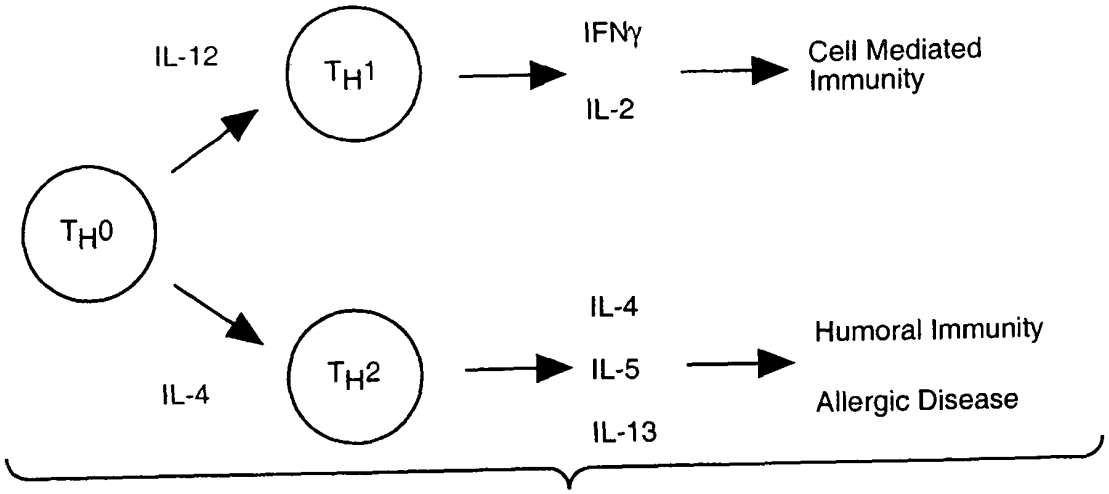

IL-12
T_H1
IFNγ
IL-2
Cell Mediated Immunity
T_H0
IL-4
T_H2
IL-4
IL-5
IL-13
Humoral Immunity
Allergic Disease

FIG._1

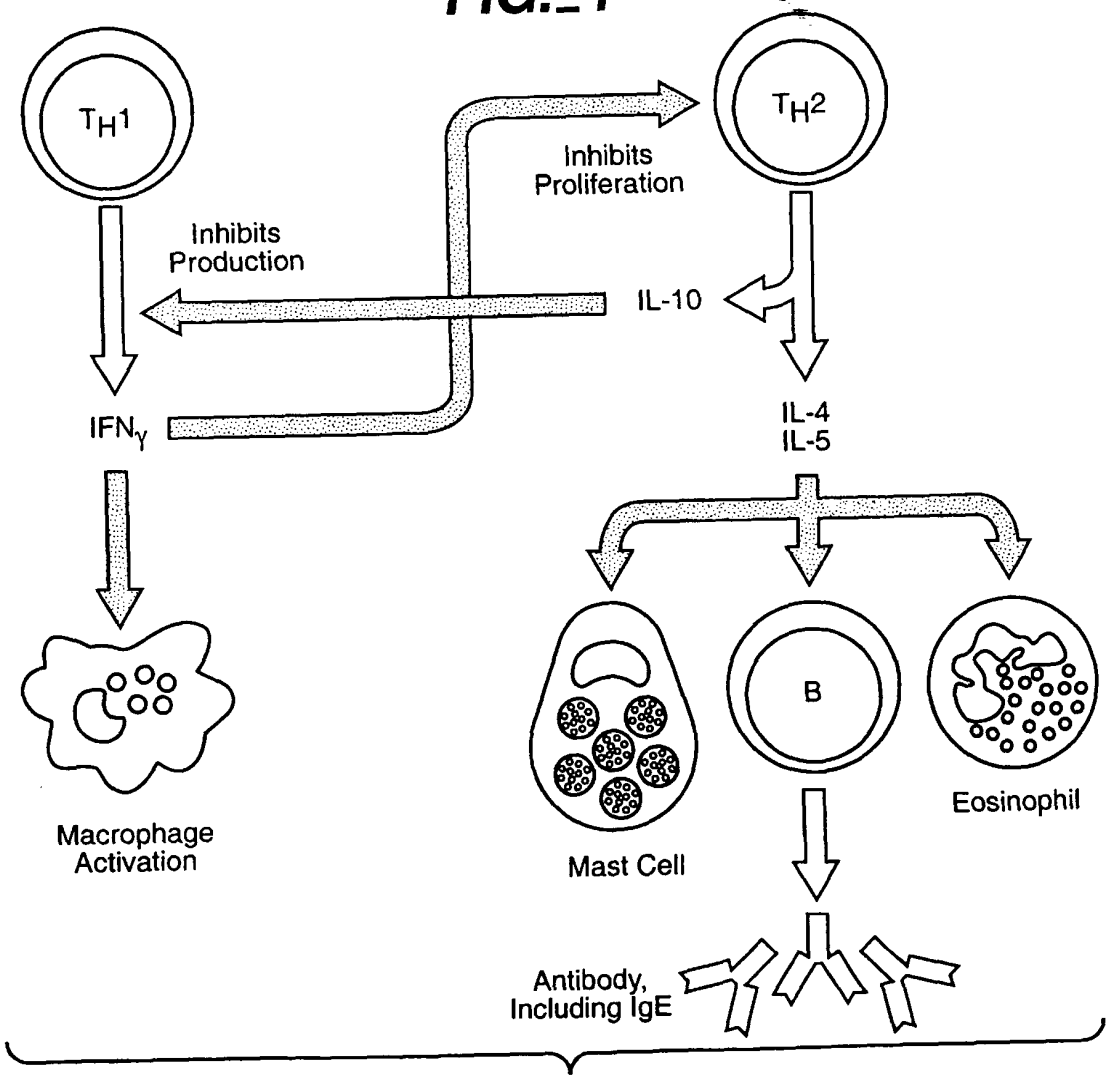

T_H1
T_H2
Inhibits Proliferation
Inhibits Production
IL-10
IFN_γ
IL-4
IL-5
Macrophage Activation
B
Eosinophil
Mast Cell
Antibody, Including IgE

FIG._2

MRGGRGAPFWLWPLPKLALLPLLWVLFQRTRPQGSAGPLQCYGVGPLGDLNCSWEPLGD
LGAPSELHLQSQKYRSNKTQTVAVAAGRSWVAIPREQLTMSDKLLVWGTKAGQPLWPPV
FVNLETQMKPNAPRLGPDVDFSEDDPLEATVHWAPPTWPSHKVLICQFHYRRCQEAAWT
LLEPELKTIPLTPVEIQDLELATGYKVYGRCRMEKEEDLWGEWSPILSFQTPPSAPKDV
WVSGNLCGTPGGEEPLLLWKAPGPCVQVSYKVWFWVGGRELSPEGITCCCSLIPSGAEW
ARVSAVNATSWEPLTNLSLVCLDSASAPRSVAVSSIAGSTELLVTWQPGPGEPLEHVVD
WARDGDPLEKLNWVRLPPGNLSALLPGNFTVGVPYRITVTAVSASGLASASSVWGFREE
LAPLVGPTLWRLQDAPPGTPAIAWGEVPRHQLRGHLTHYTLCAQSGTSPSVCMNVSGNT
QSVTLPDLPWGPCELWVTASTIAGQGPPGPILRLHLPDNTLRWKVLPGILFLWGLFLLG
CGLSLATSGRCYHLRHKVLPRWVWEKVPDPANSSSGQPHMEQVPEAQPLGDLPILEVEE
MEPPPVMESSQPAQATAPLDSGYEKHFLPTPEELGLLGPPRPQVLA

FIG._3

MNRLRVARLTPLELLLSLMSLLLGTRPHGSPGPLQCYSVGPLGILNCSWEPLGDLETPPV
LYHQSQKYHPNRVWEVKVPSKQSWVTIPREQFTMADKLLIWGTQKGRPLWSSVSVNLETQ
MKPDTPQIFSQVDISEEATLEATVQWAPPVWPPQKALTCQFRYKECQAEAWTRLEPQLKT
DGLTPVEMQNLEPGTCYQVSGRCQVENGYPWGEWSSPLSFQTPFLDPEDVWVSGTVCETS
GKRAALLVWKDPRPCVQVTYTVWFGAGDITTTQEEVPCCKSPVPAWMEWAVVSPGNSTSW
VPPTNLSLVCLAPESAPCDVGVSSADGSPGIKVTWKQGTRKPLEYVVDWAQDGDSLDKLN
WTRLPPGNLSTLLPGEFKGGVPYRITVTAVYSGGLAAAPSVWGFREELVPLAGPAVWRLP
DDPPGTPVVAWGEVPRHQLRGQATHYTFCIQSRGLSTVCRNVSSQTQTATLPNLHSGSFK
LWVTVSTVAGQGPPGPDLSLHLPDNRIRWKALPWFLSLWGLLLMGCGLSLASTRCLQARC
LHWRHKLLPQWIWERVPDPANSNSGQPYIKEVSLPQPPKDGPILEVEEVELQPVVESPKA
SAPIYSGYEKHFLPTPEELGLLV

FIG._4

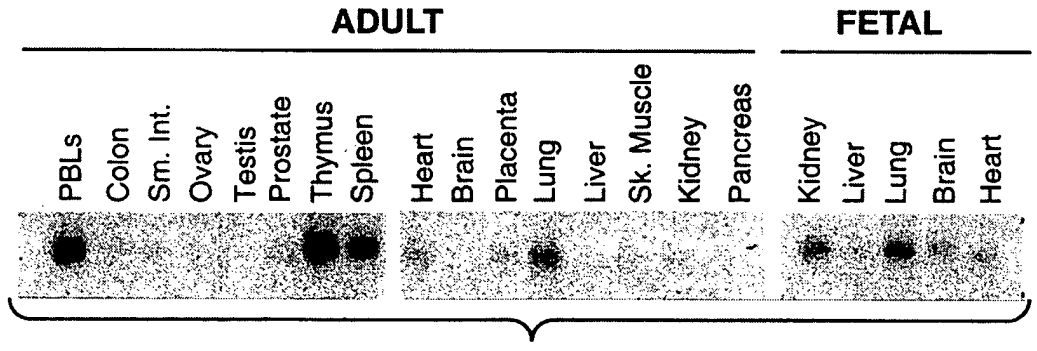


FIG._6

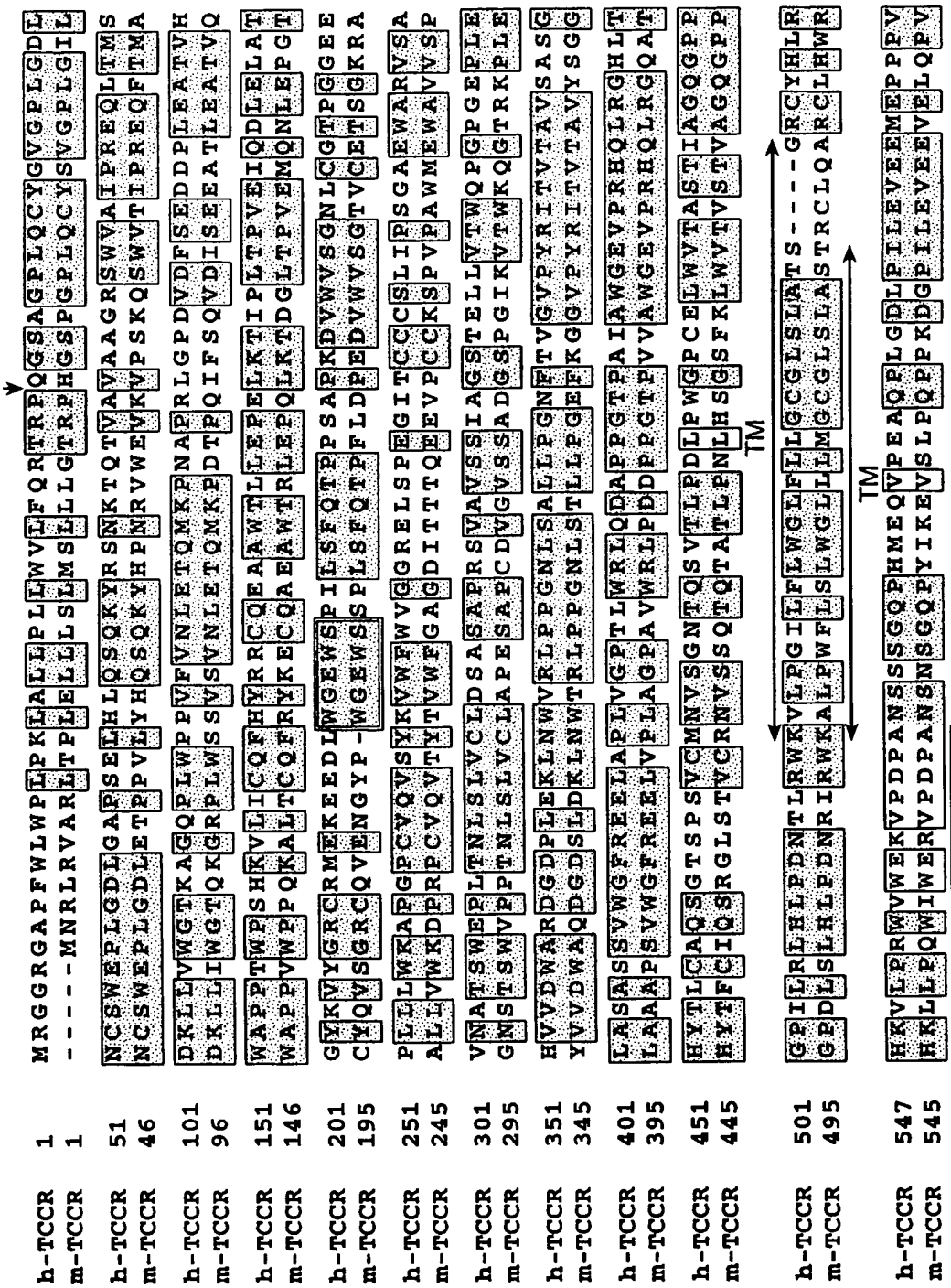


FIG._5

P1748R1

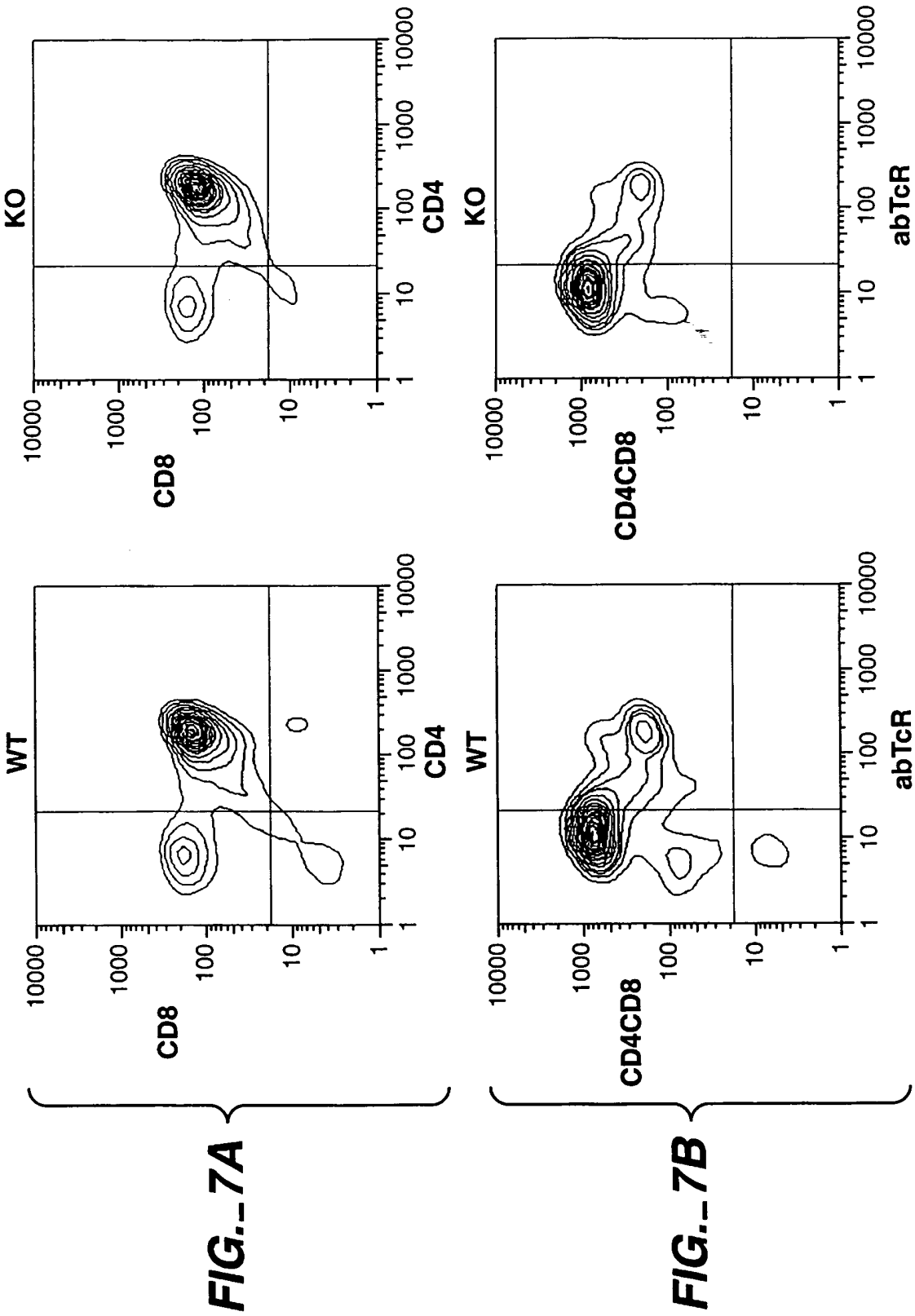


FIG._7A

FIG._7B

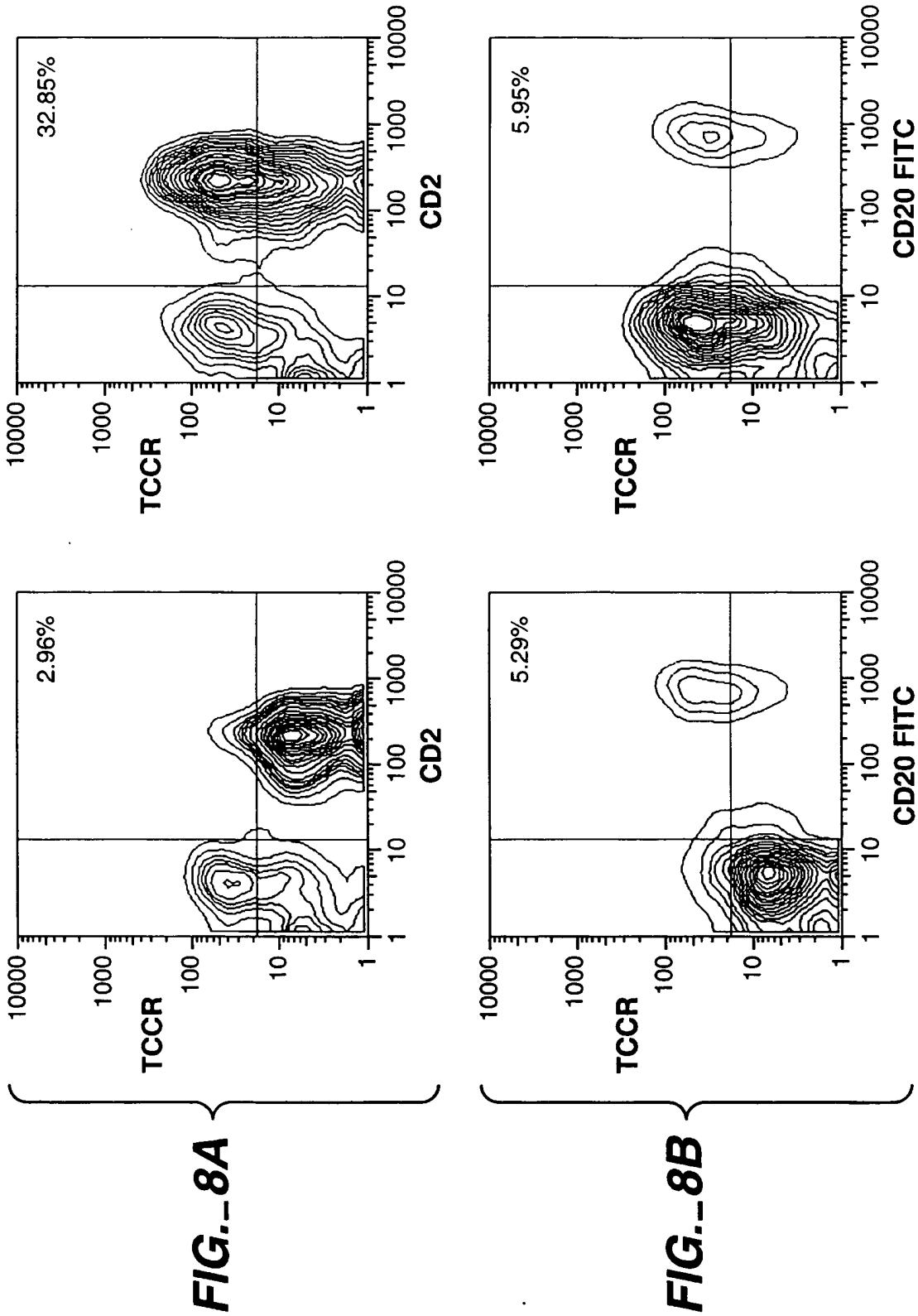


FIG._8A

FIG._8B

P1748R1

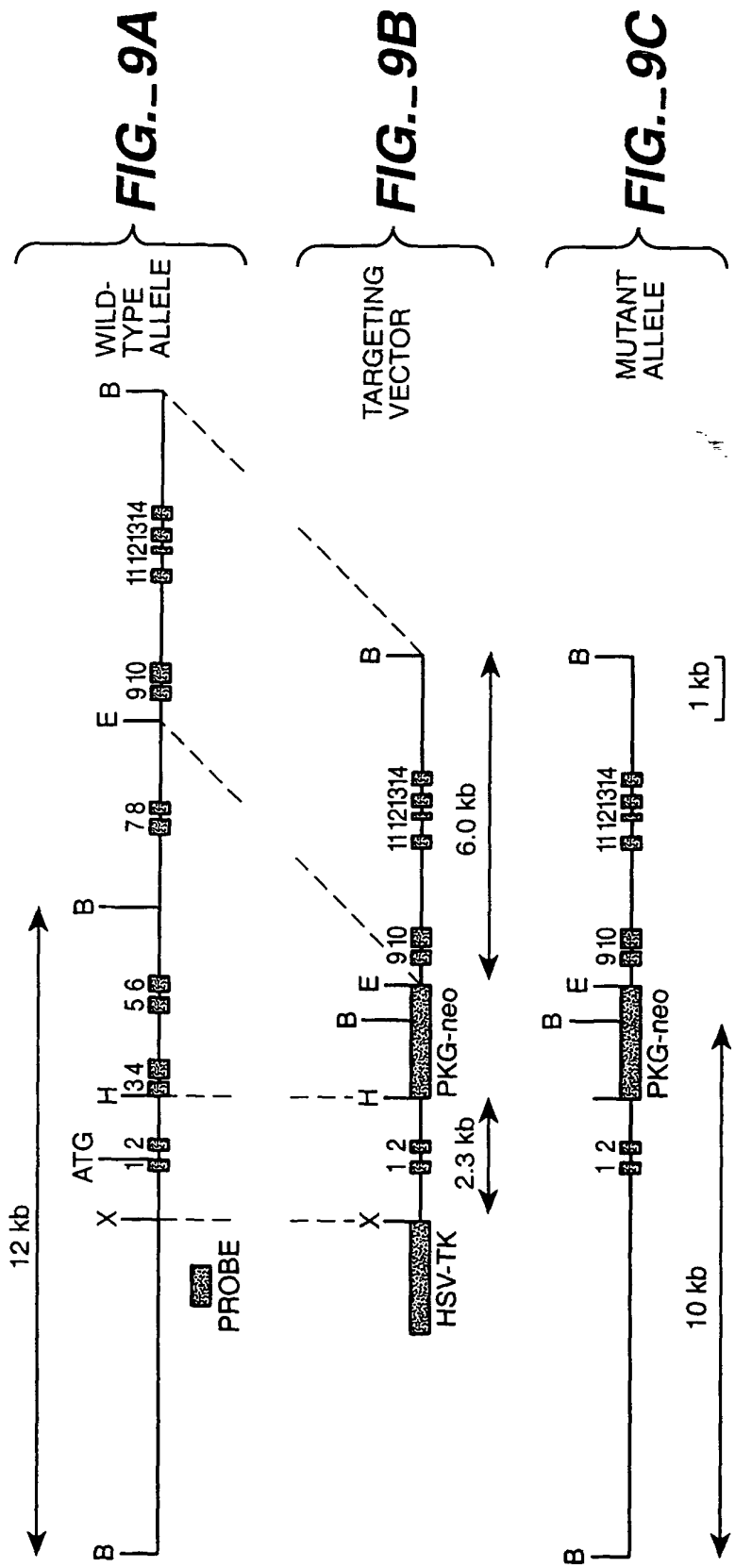


FIG._9A
FIG._9B
FIG._9C
WILD-TYPE ALLELE
TARGETING VECTOR
MUTANT ALLELE
B
E
H
X
ATG
1 2
3 4
5 6
7 8
9 10
11 12 13 14
PROBE
12 kb
PKG-neo
HSV-TK
6.0 kb
2.3 kb
1 kb
10 kb

FIG._10A

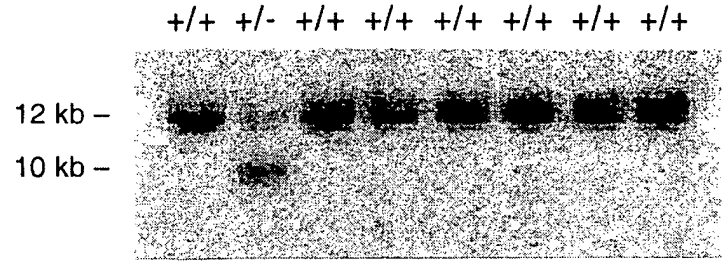


FIG._10B

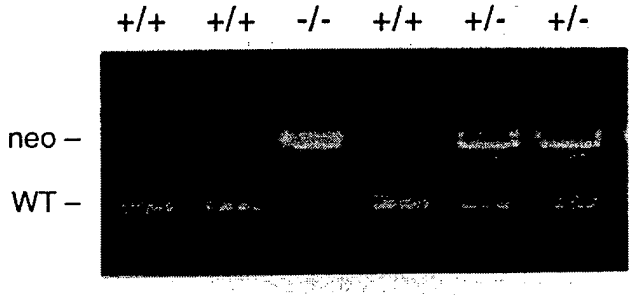
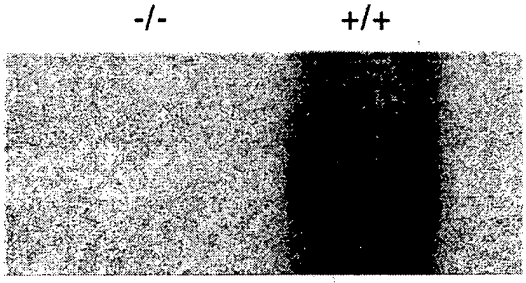


FIG._10C



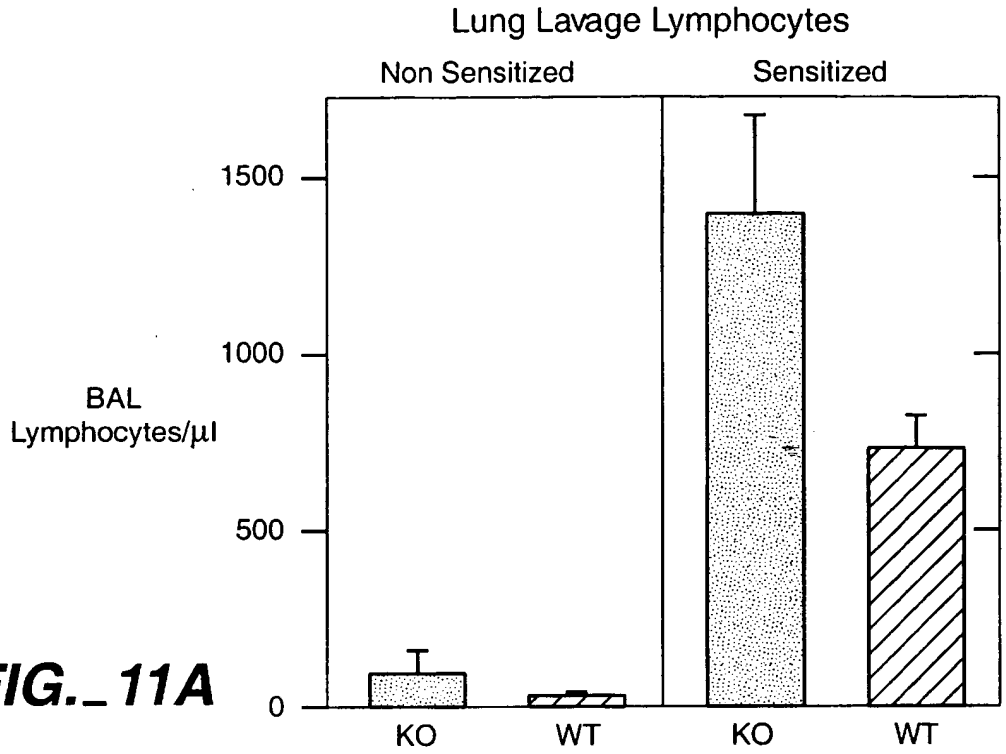


FIG._11A

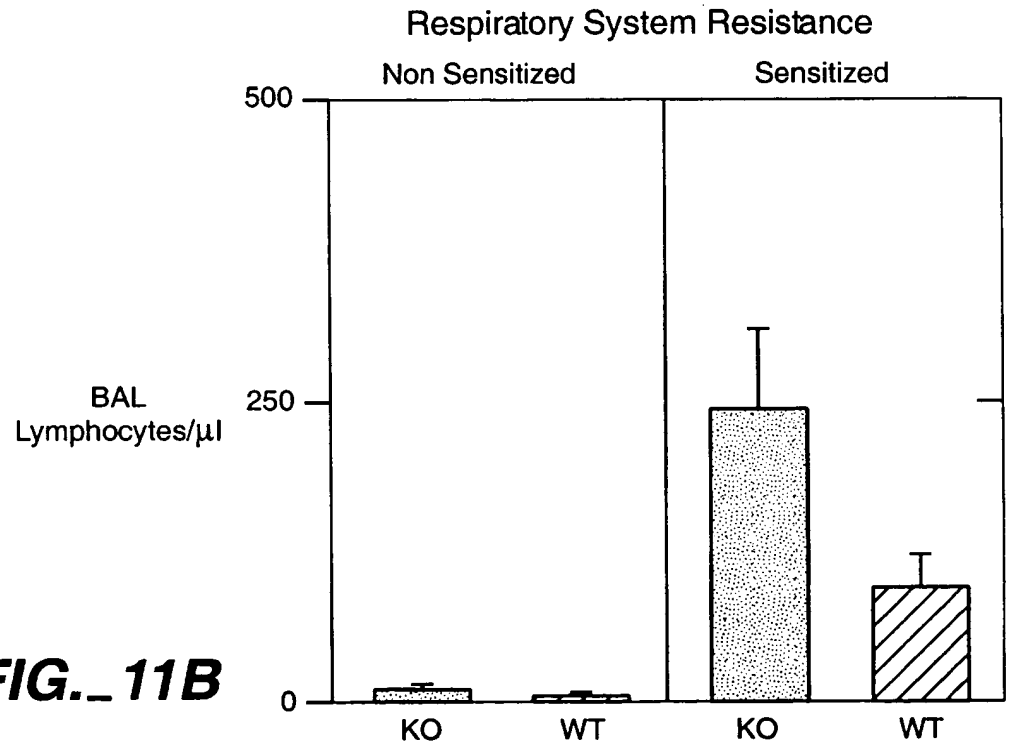


FIG._11B

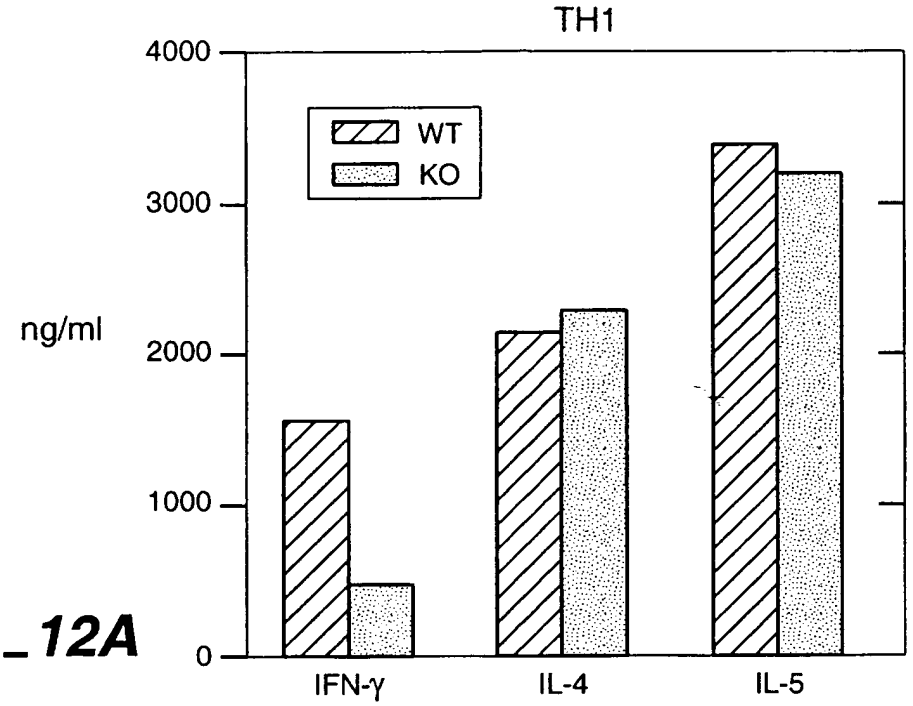


FIG._12A

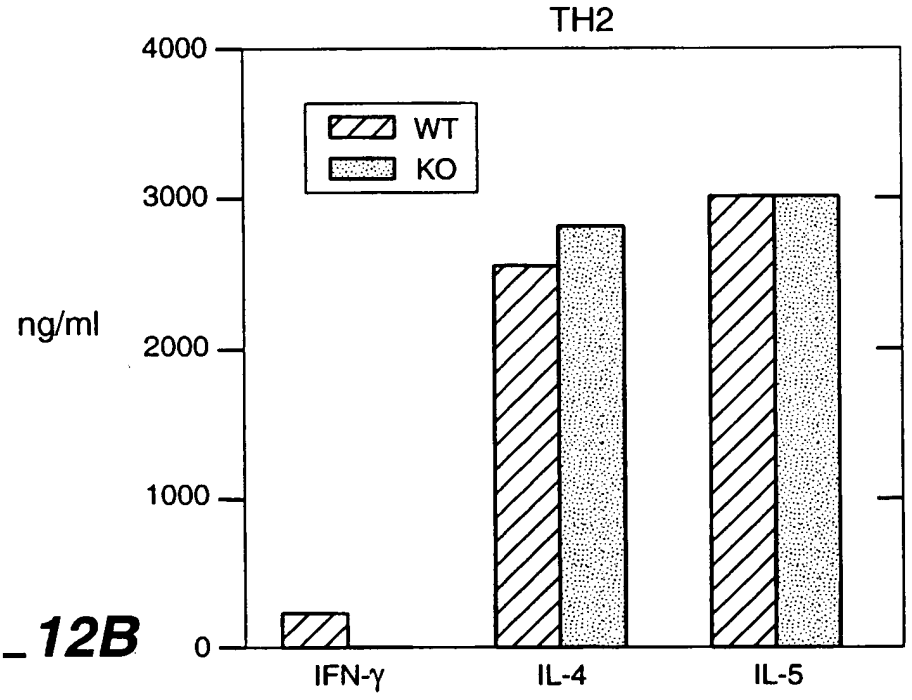


FIG._12B

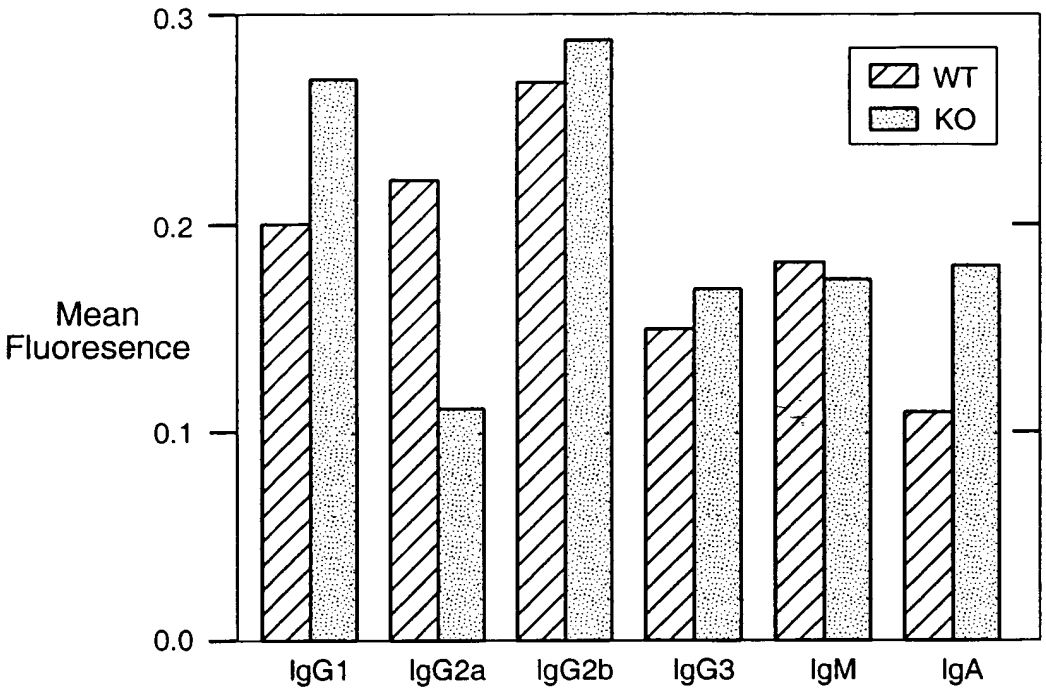

0.3
0.2
0.1
0.0
Mean
Fluoresence
WT
KO
IgG1
IgG2a
IgG2b
IgG3
IgM
IgA

FIG._13

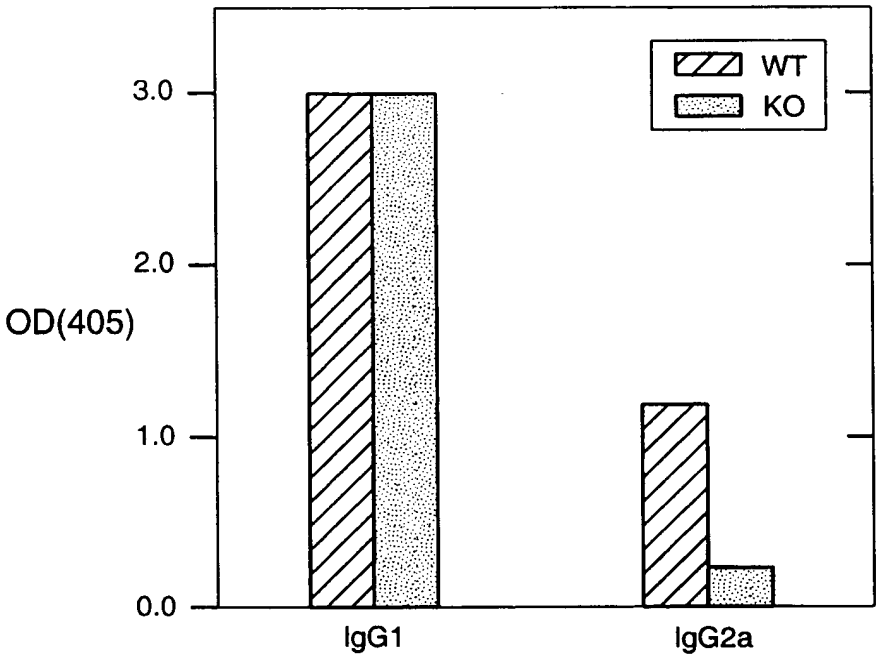

3.0
2.0
1.0
0.0
OD(405)
WT
KO
IgG1
IgG2a

FIG._14

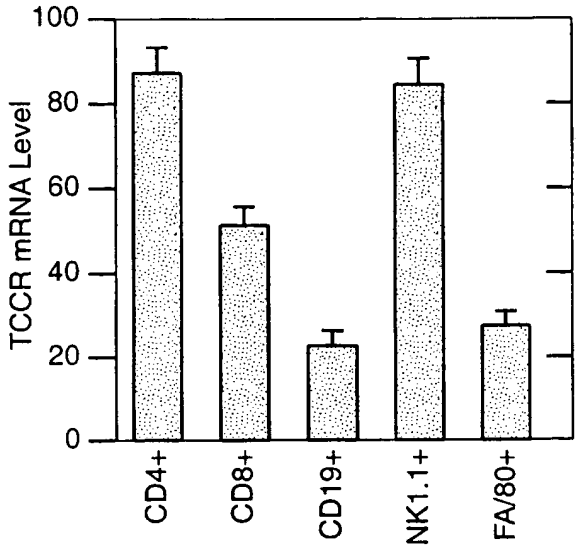


FIG._15A

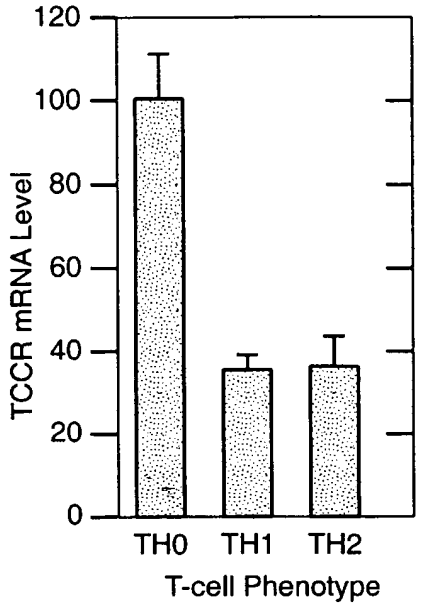


FIG._15B

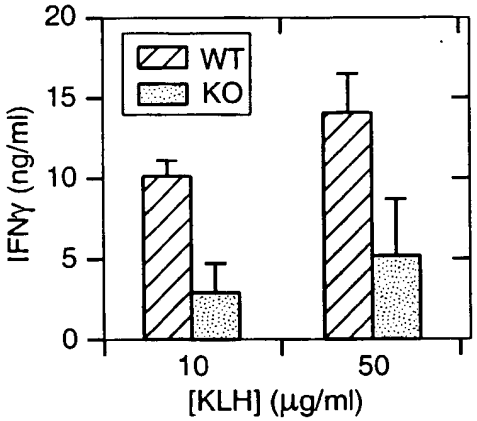


FIG._16A

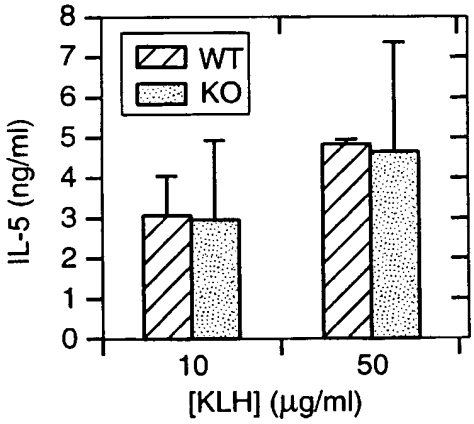


FIG._16C

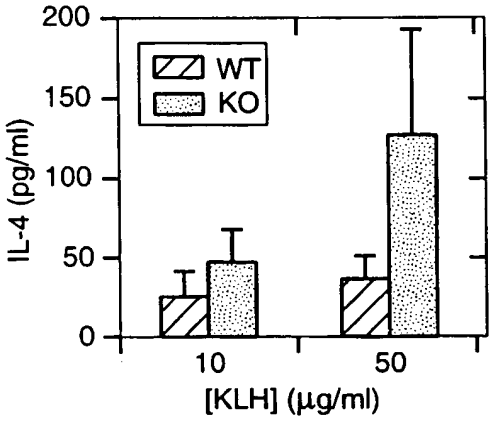


FIG._16B

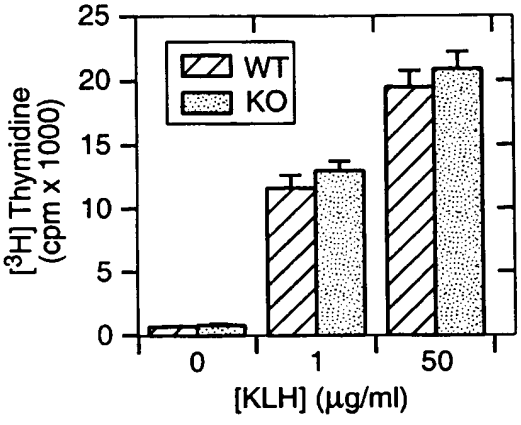


FIG._16D

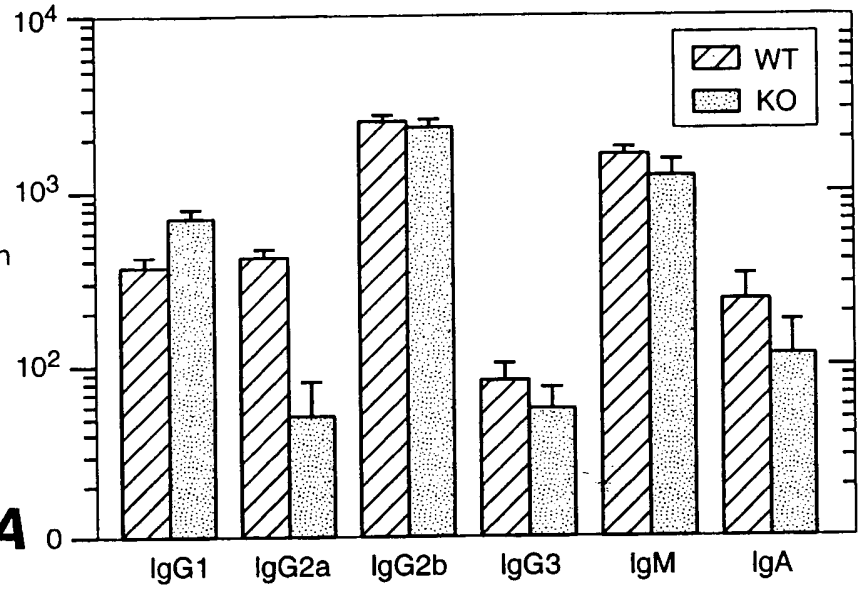


FIG._17A

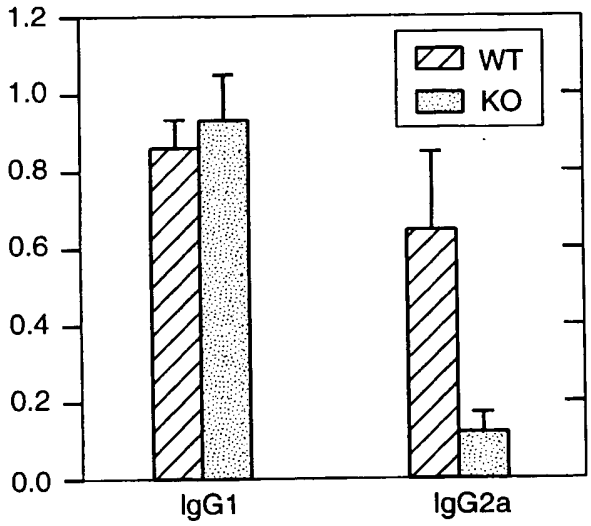


FIG._17B

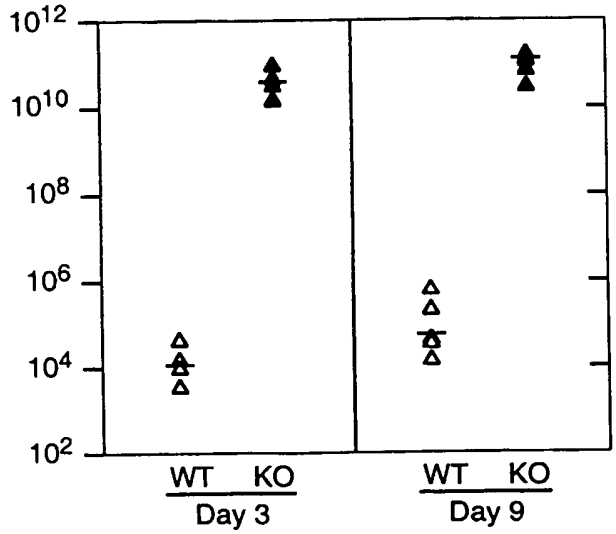


FIG._17C

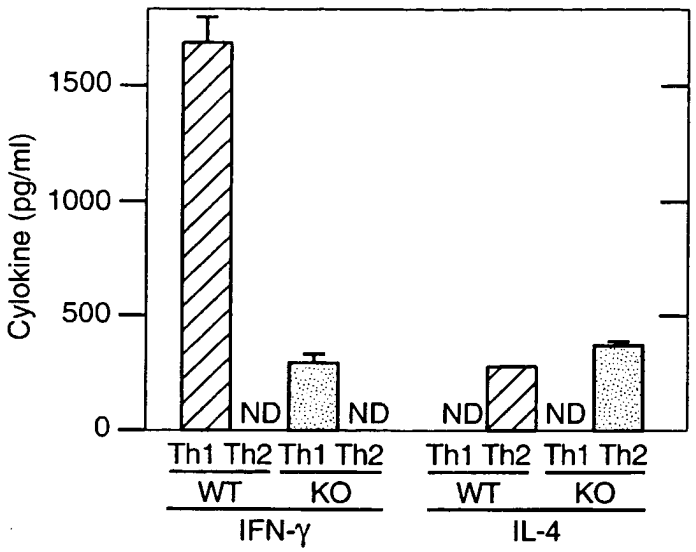


FIG._18A

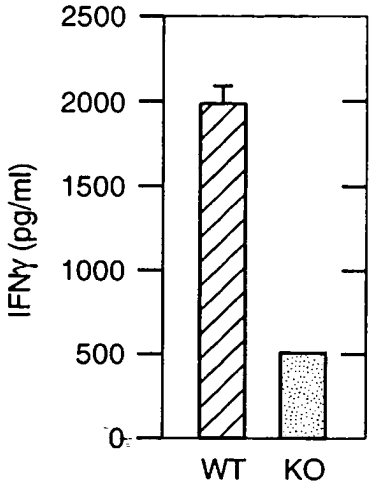


FIG._18B

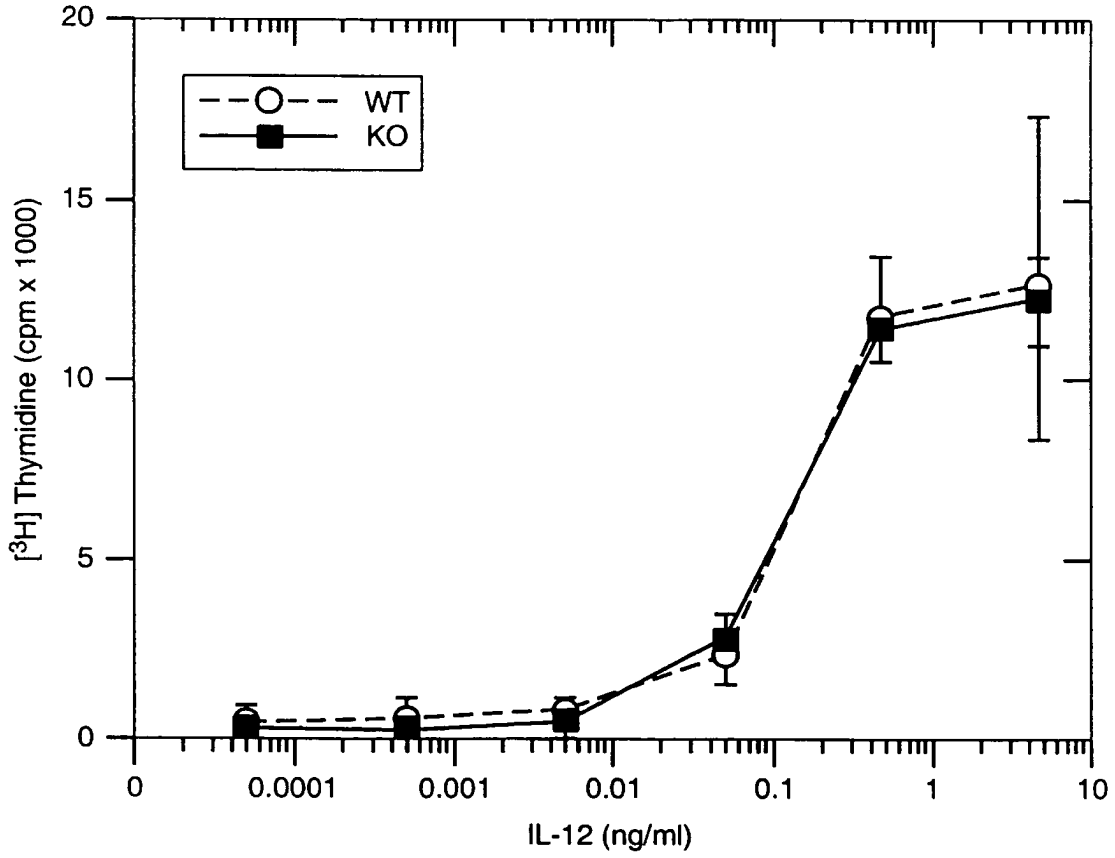


FIG._18C

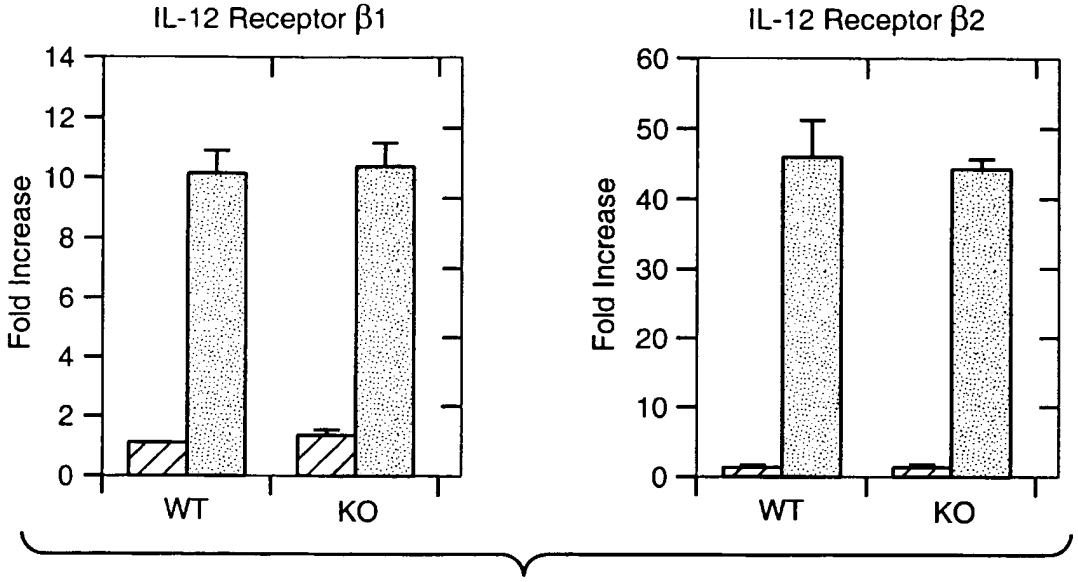


FIG._18D

Primer / Probe	Sequence	SEQ ID NO:
mTCCR, sense, Taqman	TGGTCTCTCCTGGCAACAGC	5
mTCCR, as, Taqman	AGCCAAGCACACCAGAGACA	6
mTCCR, Taqman probe	CAGCTGGGTGCCTCCCACCAA	7
mRPL19, sense, Taqman	ATCCGCAAGCCTGTGACTGT	8
mRPL19, as, Taqman	TCGGGCCAGGGTGTTTTT	9
mRPL19, Taqman probe	TTCCCGGGCTCGTTGCCG	10
mIL12Rb1, sense, Taqman	TCGCGTCTCTGGGAAGCT	11
mIL12Rb1, as, Taqman	TTTAAGCCAATGTATCCGAGACTG	12
mIL12Rb1, Taqman probe	CGCCAGCGTCCTCCTCGTGG	13
mIL12Rb2, sense, Taqman	CAAGCATTTGCATCGCTATCA	14
mIL12Rb2, as, Taqman	AATGCCTTTTGCCGGAAGT	15
mIL12Rb2, Taqman probe	ACGAATTGAGAACGTGCCCACCGT	16

FIG._19